

Perspective

Persuasive Games on Mobile Devices

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How do videogames express ideas? Without understanding how games can be expressive in a general sense, it is hard to understand how they might be persuasive.

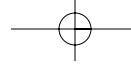
How do videogames make arguments? Videogames are different from oral, textual, visual, or filmic media. Thus, when they try to persuade, they do so in a different fashion from speech, writing, images, or moving images.

What are some design strategies for persuasive mobile games? Such design approaches need to take into account both the unique persuasive properties of videogames and the unique properties of mobile technology.

This chapter explores the three questions highlighted above. By understanding how videogames persuade by expressing ideas and making arguments in specific ways, and by leveraging the unique properties of mobile technology, designers can create videogames with tremendous persuasion potential.

How Videogames Express Ideas

Videogames are good at representing the behavior of systems. When we create videogames, we start with some system in the world—traffic, football, whatever. Let's call this the “source system.” To create the game, we build a model of that source system. Videogames are software, so we build the model by authoring code that *simulates* the behavior we want to focus on. Writing



code is different from writing prose or taking photographs or shooting video; code models a set of potential outcomes, all of which conform to the same general rules. One name for this type of representation is *procedurality* (Murray 1997); procedurality is a name for computers' ability to execute rule-based behaviors. Videogames are a kind of procedural representation.

Consider some examples: *Madden Football* is a procedural model of the sport of American football. It models the physical mechanics of human movement, the strategy of different sets of plays, and even the performance properties of specific professional athletes. *Sim City* is a procedural model of urban dynamics. It models the social behavior of residents and workers, as well as the economy, crime rate, pollution level, and other environmental dynamics.

So, in a videogame we have a source system, and a procedural model of that source system. A player needs to interact with the model to make it work—videogames are interactive software; they require the player to provide input to make the procedural model work. When the player plays, he or she forms some idea about the modeled system, and about the source system it models. He or she forms these ideas based on the way the source system is simulated; that is to say, there might be many different ways of proceduralizing a system. One designer might build a football game about the strategy of coaching, while another might build one about the duties of a particular field position, such as a defensive lineman. Likewise, one designer might build a city simulator that focuses on public services and new urbanism (Duany, Plater-Zyberk, & Alminana 2003), while another might focus on Robert Moses-style suburban planning.

This is not just a speculative observation: it highlights the fact that the source system never really exists as such. One person's idea of football or a city or any other subject for a representation of any kind is always *subjective*.

The inherent subjectivity of videogames creates dissonance-gaps between the designer's procedural model of a source system and a player's subjectivity, preconceptions, and understanding of the simulation. This is where videogames become expressive: they encourage players to interrogate and reconcile their own models of the world with the models presented in

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a game. While videogames are often considered playthings, this charge toward reconciliation can also make games challenging or disturbing. This “simulation gap” creates a condition of crisis in the player, which I've called “simulation fever” (Bogost 2006).

How Videogames Persuade

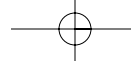
Most of the time, videogames create procedural models of fantasy lives, like that of the pro ballplayer (*Madden*), or a blood elf (*World of Warcraft*), or a space marine (*Doom*). But, we can also use this facility to invite the player to see the ordinary world in new or different ways. One way to use videogames in this fashion is for persuasion, to make arguments about the way the world works.

My approach to building and understanding “Persuasive Games” is different from B.J. Fogg's approach to “Persuasive Technology” (Fogg 2002). Instead of approaching the topic through the discipline of psychology, I approach it through the discipline of rhetoric. Rhetoric is a very old line of philosophical thought that focuses on the art of effective persuasion. It is a field that has its roots in classical oratory, but which Aristotle extended to philosophical deliberation as a means of considering arguments.

I suggest combining *rhetoric* with the procedural representation we get in games, described above. The result would be a particular kind of rhetoric, one focused on the art of using processes persuasively, just as oral rhetoric focuses on using the spoken word persuasively, and visual rhetoric on using images persuasively. I call this new form of rhetoric “procedural rhetoric” (Bogost 2007).

Since videogames are procedural models of things in the world, procedural rhetoric is particularly useful for making claims about how things work by making models of how they work, rather than just describing their function through words or images. Furthermore, since procedural models are inherently subjective, we can also make models about how we *think* things work, or how they *don't* work, or how we *wish* they worked. The models we

Since procedural models are inherently subjective, designers can make models of how they *think* things work or *don't* work, or how they *wish* they worked. Such models need not represent aspects of the material world, such as traffic or bridges. They can also represent what is abstract or conceptual, such as social practices, public policy, and everyday experiences.



build need not represent just material things like traffic or bridges either—they can also represent abstract and conceptual things like social practices, public policy, and everyday experiences. Persuasive Games, then, are videogames that mount effective procedural rhetorics.

Persuasive Design for Mobile Games

Persuasive Games is not only the name I give to games of this kind. It is also the design philosophy that my commercial game studio uses to create games about topics such as global petroleum, agribusiness, disaffected copy store workers, and nutrition. However, designing such games for mobile devices requires not only an understanding of procedural rhetoric but an appreciation for the unique affordances of mobile devices.

When designing mobile persuasive games, one could treat mobile devices as just another microcomputer, applying the representational strategies I've described above to the smaller form factor of the mobile phone. But such an approach doesn't take into consideration the social or "mobile" aspects of such devices.

Likewise, one might target specific demographics that use mobile devices. For example, teenagers might be a desirable target for a particular social message, or perhaps executives with handheld PDA devices. But this too doesn't take into account the unique properties of mobile devices, just some of the kinds of people who use them.

One notable property of mobile devices is our ability to use them fluidly out in the world. The values we associate with this kind of mobility often have to do with the ubiquity of access and control; values such as seamlessness, immediacy, and transparency pervade such notions. This is a ubicomp-influenced dream of a frictionless networked world of total and complete presence—a Bloomberg terminal for everything.

But if we recall the gap between the procedural representation in a videogame and the source system that the game models, we might fall upon another approach: using mobile devices' properties of presence and location to *amplify difference and incongruity* rather than to remove them. This technique recalls the artistic technique of *defamiliarization*, which compels the viewer to see the ordinary in a new and unfamiliar way.

Airport Insecurity

As an example of this kind of mobile persuasive game design, consider a game we created at Persuasive Games. *Airport Insecurity* (Persuasive Games 2005) is a mobile game about the Transportation Security Administration (TSA). In the game, the player takes the role of a passenger at any of the 138 most trafficked airports in the USA. The gameplay is simple: The player must progress through the security line in an orderly and dignified fashion, taking care not to lag behind when space opens in front of him, as well as to avoid direct contact with other passengers (Figure 1a).

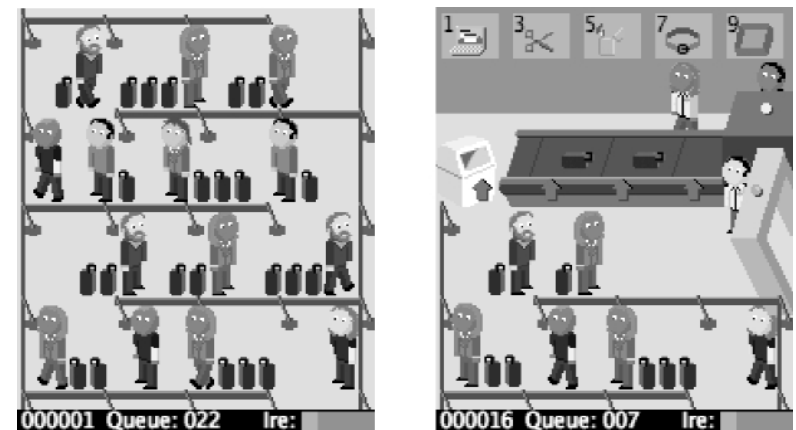
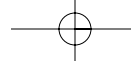


Figure 1 Screens from *Airport Insecurity*. a) waiting in line in the game; b) reaching the front of the security line with items randomly assigned by the game.

When he reaches the x-ray check, the player must place his luggage and personal items on the belt. The game randomly assigns luggage and personal items to the player, including "questionable" items such as lighters and scissors, as well as legitimately dangerous items like knives and guns (Figure 1b).

For each airport, we gathered traffic and wait-time data to model the flow of the queues, and we also gathered as much as we could find in the public record on TSA performance. General Accountability Office (GAO) analysis of TSA performance used to be reported publicly, but the agency reportedly started classifying the information after it became clear that it might pose a national security risk. The upshot of such tactics is that the average citizen has no concept of what level of security they receive in exchange for the rights



they forego. While the U.S. government wants its citizens to believe that increased protection and reduced rights are necessary to protect us from terrorism, the effectiveness of airport security practices is ultimately uncertain. The game made claims about this uncertainty by modeling it procedurally: players get to choose if they will dispose of their dangerous items in a trash can near the x-ray belt, or test the limits of the screening process by carrying them through.

Nothing I've mentioned so far about *Airport Insecurity* couldn't have been done on a non-mobile platform. But we chose the mobile phone as the platform for this game precisely because we wanted players to *play the game while in line at airport security*. When in queue at airport security, many of us file blindly through without asking ourselves how well or justly security actually operates. By inviting the player to explore a videogame-based model of the very experience they were taking part in, we hoped to amplify their estrangement by collapsing the source system and the procedural system on top of one another. No platform other than mobile would have made this possible.

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Cruel 2 B Kind

Consider another example, this one a live action game played via text messaging on mobile phones in a real-world environment. *Cruel 2 B Kind*, which ubiquitous game researcher and designer Jane McGonigal and I created, is a modification of games like *Assassin* in which players attempt to surreptitiously eliminate each other with predetermined “weapons” such as water pistols. But in *Cruel 2 B Kind*, players “kill with kindness”—each player is assigned a “weapon” and “weakness” that corresponds with a common, even ordinary pleasantry. For example, players might compliment someone's shoes, or serenade them.

While *Assassin* is usually played in closed environments such as college dorms, *Cruel 2 B Kind* is played in public, on the streets of New York City or San Francisco or anywhere in the world. Players not only don't know who their target is, they also don't know who is playing! In these situations,

players are forced to use guesswork or deduction to figure out whom they might target. As a result, players often “attack” the wrong groups of people, or people who are not playing at all. The reactions to such encounters are startling for all concerned; after all, exchanging anonymous pleasantries is not something commonly done on the streets of New York (Figure 2).



Figure 2
Cruel 2 B Kind
participants on
the streets of
New York City.

Cruel 2 B Kind asks the player to layer an alternative set of social practices atop the world they normally occupy. Instead of ignoring their fellow citizens, the game demands that players interact with them. This juxtaposition of game rules and social rules draws attention to the way people do (or more properly, don't) interact with one another in everyday life. Mobile devices orchestrate this experience by delivering weapons of kindness and allowing players to record and track their score.

Airport Insecurity and *Cruel 2 B Kind* both focus on social and political practices—the way people interact with their government and with each other. But we can also imagine using defamiliarization as a mobile design strategy in the service of more traditional areas of influence.

For example, consider a hypothetical mobile phone game about health and nutrition. The game would be designed to intervene in everyday situations such as dining out or shopping for groceries, where consumers are more likely to make poor nutritional decisions. B.J. Fogg (2002) has previously discussed the notion of timeliness as a technique for persuasive technology, and certainly timeliness would be part of a nutritional intervention. But adding defamiliarization might accentuate the player's understanding of the gap between good and bad nutritional decisions.

For example, imagine that the mobile game allowed the player to choose a level that corresponded with the type of food the player was about to eat (e.g., fast food hamburger, or grocery store frozen meal). The game might offer the player a level or scenario based on a regular diet of that food stuff. How easy or difficult might it be to climb stairs, run a race, or play with one's grandchild after fifty years of eating burgers?

Disruptive and Strange

As players, we come to a videogame with an idea of the world and how it works. A game presents a model of that same world, but that model has its own properties that likely differ from our own. When we put the two models together, we see where they converge and diverge—this is what we do when we play games critically. One of the promising and largely unexplored features of mobile devices is their ability to collapse a representation and the situation it represents onto one another, making the convergences and dissonances more apparent. Mobile devices thus offer a particular opportunity to present procedural arguments that produce player deliberation—not by making those arguments seamless and comfortable, but rather by making them disruptive and strange.

Mobile devices offer the opportunity to present procedural arguments that require players to deliberate—not by making those arguments seamless and comfortable, but rather by making them disruptive and strange.

Mobile persuasive games offer a particularly promising tool for intervention precisely because videogames are so adept at creating fictional worlds. That is to say, mobile persuasion has power not only because mobile devices can easily insert aspects of the real world into daily life, but also because they can insert aspects of imaginary worlds into daily life.

About the Author

Ian Bogost is a videogame designer and researcher. He is assistant professor at the Georgia Institute of Technology, and founding partner at Persuasive Games LLC (persuasivegames.com). He is author of *Unit Operations: An Approach to Videogame Criticism* (the MIT Press 2006) and of *Persuasive Games: The Expressive Power of Videogames* (the MIT Press 2007), and numerous articles on videogame culture and criticism. His videogames about topics as varied as airport security, disaffected employees, the petroleum industry, and tort reform have been played by millions of people and exhibited internationally. He is currently working on a book about the Atari 2600, and a game about the politics of nutrition.

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